



Llywodraeth Cymru
Welsh Government

Digital Competence Framework guidance

Update – June 2018



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Digital Competence Framework guidance

Audience

The entire education workforce, government and national partners, including local authorities and regional consortia, workforce unions, diocesan authorities, governing bodies and Estyn.

Overview

This document is to accompany the Digital Competence Framework (DCF) and help schools in Wales to implement it.

Action required

None – for information only.

Further information

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Additional copies

This document can be accessed from the Welsh Government's website at gov.wales/curriculumforwales

Related documents

Qualified for life (2014); *Successful Futures: Independent Review of Curriculum and Assessment Arrangements in Wales* (2015); *Teaching Tomorrow's Teachers* (2015); *A curriculum for Wales – a curriculum for life* (2015); *Education in Wales: Our national mission, Action plan 2017–21* (2017)

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1. Introduction

The Digital Competence Framework (DCF) is the first element of the new curriculum for Wales to be made available. Now that settings and schools have had time to consider the DCF we have revisited this guidance to update some key messages.

About digital competence

Digital competence is the set of skills, knowledge and attitudes that enable the confident, creative and critical use of technologies and systems. It is essential for learners if they are to be informed, capable and have the potential to be successful in today's society.

Digital competence should not be confused with information and communication technology (ICT). Digital competence is one of three cross-curricular responsibilities, alongside literacy and numeracy; it focuses on developing digital skills which can be applied to a wide range of subjects and scenarios that are transferrable to the world of work. However, it is not intended that digital competence should be artificially imposed into all subject areas. The DCF therefore includes examples of classroom task ideas that can be used to develop skills in naturally occurring, meaningful ways.

Development of the Digital Competence Framework

We are committed to ensuring that all our learners in Wales will have higher standards of literacy and numeracy, and will become more digitally and bilingually competent, to evolve into enterprising, creative and critical thinkers.

In *A curriculum for Wales – a curriculum for life* (2015), Welsh Government set out its plan to develop a new curriculum. The plan is based on recommendations in Professor Graham Donaldson's report *Successful Futures* (2015)¹, following his independent review of curriculum and assessment arrangements in Wales, and with regard to digital competence the independent ICT Steering Group's report (2013)². As part of this plan, the DCF, encapsulating a range of skills that will help learners thrive in an increasingly digital world, has been developed by practitioners from Digital Pioneer Schools, drawing on research, including consideration of existing regional and international digital frameworks. The practitioners have been supported by external experts, including Professor Tom Crick from Cardiff Metropolitan University, Estyn and regional consortia.

We have re-iterated our commitment with *Education in Wales: Our national mission, Action plan 2017–21* (2017) (gov.wales/topics/educationandskills/allsectorpolicies/education-in-wales/?lang=en) which sets out how the school system will move forward over the period 2017–21, securing implementation of the new curriculum with a focus on leadership, professional learning, and excellence and equity within a self-improving system.

1 *Successful Futures: Independent Review of Curriculum and Assessment Arrangements in Wales* by Professor Graham Donaldson CB (2015)

2 *The ICT Steering Group's Report to the Welsh Government* by S Arthur, T Crick and J Hayward (2013)

Learner progression

The DCF has been developed to be inclusive of all learners aged 3 to 16-plus. It covers the development of skills from the earliest stages that very young children need to learn. For learners with additional learning needs this incorporates 'Routes for Learning' skills, which are the skills that form the foundation for other, higher skills to be developed.

This approach seeks to view the learner holistically and provide several pathways of possible development, broken down into small steps and individualised for each learner. Many learners will pass quickly through these stages; for others these skills need to be taught specifically, taking into account individuals' specific strengths and needs. This ensures there are the necessary developmental steps to using technology in creative ways.

Under the United Nations Convention on the Rights of the Child (UNCRC) and Welsh Government's overarching strategy document *Children and Young People: Rights to Action* (2004), all children and young people must be provided with an education that develops their personality and talents to the full. The UNCRC was made law in 2011 which places a duty on Welsh Government to have due regard to the UNCRC when making decisions.

Opportunities for settings and schools are embedded within the DCF to help develop their learners' understanding of the articles within the UNCRC.

Digital competence is a cross-curricular responsibility and the structure of the DCF has been designed to align with the format of the existing National Literacy and Numeracy Framework (LNF). Both are currently structured around year-by-year progression, except where Routes for Learning are being followed. However, as the new curriculum develops and the concept of progression reference points is clarified, both formats will be reviewed.

Ongoing review

Work to refine the content of the DCF continued after its launch. Taking account of feedback from settings, schools and wider stakeholders, these refinements were incorporated into the current version in September 2017.

The content of the DCF will now not change until after the new curriculum is made available for feedback in April 2019.

Practitioner support

Digital Pioneer Schools are working with other schools to help with implementation of the DCF. They, together with regional consortia, have fully embraced the partnership approach to supporting schools with necessary expertise.

This is an ongoing process that is responsive to the needs of the profession.

Inspection

Estyn will continue to inspect ICT across the current curriculum, until the new curriculum is introduced. Estyn will report on learner standards in using ICT across the current curriculum on every inspection and each inspection report will include a paragraph on learners' standards in applying ICT across the current curriculum in Inspection Area 1, Standards.

Where schools are creative and imaginative in taking forward initiatives for the benefit of learners, including drawing on the DCF to develop their practice, inspectors will approach such innovation and flexibility in a positive way.

2. Structure

The DCF comprises four high-level strands. These are subdivided into elements which, in turn, are supported by classroom task ideas.

Strands and elements

The DCF sets out the digital skills to be attained by learners aged between 3 and 16 across four strands.

- › Citizenship.
- › Interacting and collaborating.
- › Producing.
- › Data and computational thinking.

Each strand is split into a number of elements, as shown below.

Citizenship	Interacting and collaborating	Producing	Data and computational thinking
<ul style="list-style-type: none"> › Identity, image and reputation › Health and well-being › Digital rights licensing and ownership › Online behaviour and cyberbullying 	<ul style="list-style-type: none"> › Communication › Collaboration › Storing and sharing 	<ul style="list-style-type: none"> › Planning, sourcing and searching › Creating › Evaluating and improving 	<ul style="list-style-type: none"> › Problem solving and modelling › Data and information literacy

Skill statements and tasks

For each element there are skill statements which describe the skills a learner would be expected to have attained at a given stage. To help clarify their meaning and purpose, skill statements are supported by examples of 'classroom task ideas' that could be used to demonstrate competence for a particular skill.

Classroom task ideas

Where appropriate, skill statements and tasks are supported by classroom task ideas which provide suggestions and links to guidance and practical examples of what practitioners can do to use the DCF.

This is the most organic area of the DCF as classroom task ideas will need to change and develop to reflect new technologies and the increasing experience and expertise within the digital learning field.

Not all classroom task idea areas of the DCF are populated. Following advice from Digital Pioneer Schools, more ideas and tasks have been added to our Hwb website where they can be adapted for suitability for your setting or classroom.

We encourage all schools to access Hwb to make use of the resources and also to develop and share resources for other schools to use across Wales.

Strands – further information

Citizenship

The focus of this strand is on learners developing the skills needed to contribute positively to the digital world around them. These skills will help learners to critically evaluate their place within the digital world, so that they are prepared to encounter the positive and negative aspects of being a digital citizen.

Critical thinking skills, strategies and tools will be developed and applying them in all aspects of their digital lives will equip learners to become responsible, independent consumers and producers of digital products in the rapidly changing digital world.

Interacting and collaborating

Under this strand learners will explore methods of electronic communication and identify which are the most effective for a given situation. Learners will also be able to store data appropriately and use collaboration techniques successfully.

Learners will explore both formal and informal methods of communication, suitable for a range of contexts. This will include, for example, professional aspects of e-mail and other communication channels such as social media and instant messaging.

Storing and sharing has become an essential part of our lives. Learners will not only look at how to store data on different systems but also at the implications of data laws. Along with storing information, learners will understand how to share it appropriately and for specific purposes.

Collaboration, in all forms, is an important aspect of the curriculum and electronic collaboration is vital. Learners will explore a range of collaboration methods and as they progress, they will develop the skills to successfully work together in different contexts and situations as and where appropriate.

Producing

This strand covers the cyclical process of planning (including searching for and sourcing information), creating, evaluating and improving digital content. It should not restrict creativity but should ensure rigour, so that what has been created is fit for its intended purpose. While some of the skills in this strand are applicable in other contexts, it is critical to the development of digital competence that they are applied to a digital context.

Digital content includes a huge variety of multimedia components, such as text, images, graphics, audio, video and any combination of these. It is intended that learners experience and create using a wide range of multimedia components across contexts for a variety of purposes. The DCF also recognises the importance of creating original content as well as redesigning or repurposing existing content either individually or collaboratively.

Skills develop as the level of sophistication of digital content increases. Moving through the DCF, learners will begin to combine multimedia components in increasingly complex ways, requiring greater consideration of the audience for and purpose of the digital content. The hardware and software tools used to create and edit will also increase in complexity and settings and schools should work with their local authority/regional consortia to assess whether additional resources would add significant value to the delivery of the DCF. This should include reviewing against existing centrally funded services such as Hwb, before any investment is made.

Data and computational thinking

We live in a data-rich environment with databases being an intrinsic part of our lives. Through this strand, learners will gain an understanding of the importance of data and information literacy by exploring aspects of collection, representation and analysis. Learners will look at how data and information link into our digital world and will develop essential skills for the modern workplace.

Computational thinking is a combination of scientific enquiry, problem solving and thinking skills; it is not thinking like or about computers.

Computational thinking has many concepts and approaches, some of which readily fit with the Producing and Interacting and collaborating strands. Before learners can use computers to solve problems, they must first understand the problems and methods of solving them. Among other things, learners will consider the following high-level questions to gain an understanding of why computational thinking is important.

- › Is this the most efficient way to solve the problem?
- › Is this the fastest way?
- › Does it require the least amount of resources?
- › Does it solve the problem and give the right answer?
- › Can it be used to solve other problems?

3. How to use

The DCF is available in an online, interactive format, hosted on the Learning Wales website which can be accessed through learning.gov.wales/resources/browse-all/digital-competence-framework/?lang=en. There is a short video explaining how the online version works and how elements can be selected in order to create views that meet your individual needs. It is also available as an Excel spreadsheet that can be downloaded from the online version above.

Welsh Government, in partnership with Digital Pioneer Schools, has developed a professional learning needs tool which is available on Hwb at dysgu.hwb.gov.wales/menus/be6397f8-d093-424f-96a7-d72bdd26861e. This tool is designed to help practitioners identify the areas where they feel confident and areas where they feel they need further development.

If you are a headteacher, you can also request access to your school's dashboard which will give you a clear overview of your school's professional learning needs. The dashboard will provide anonymised summary information for your whole school, helping to inform the development of professional learning support to practitioners in your school. The dashboard is available at cwricwlwmigymru.llyw.cymru/2017/06/14/y-fframwaith-cymhwysedd-digidol-adnodd-anghenion-dysgu-proffesiynol.

4. Developing understanding and planning

The DCF has been available to settings and schools since September 2016. Since then they have been encouraged to:

- › develop a clear vision for digital learning
- › develop policies and procedures for embedding digital competence
- › identify a lead responsible for digital competence
- › incorporate digital competence into school improvement plans
- › undertake a mapping exercise of delivery of digital competence
- › undertake staff audits and identify professional learning requirements.

Additional classroom task ideas will be developed and made available by Digital Pioneers. Settings and schools are encouraged to develop resources which can be shared via Hwb to support planning and delivering of digital competence.

From September 2018 it is expected that settings and schools will:

- › have a clear vision for delivering digital competence in the classroom across the curriculum
- › have established staff responsibilities for embedding digital competence across the curriculum
- › review hardware and software requirements, and staff professional learning needs on an ongoing basis
- › be mapping digital competence against department/year of current curriculum
- › have planned for and be delivering staff professional development in respect of digital competence, working with regional consortia.

From January 2020, the new curriculum and assessment arrangements will be available. Digital expectations will be embedded in the new curriculum and settings and schools will be:

- › comparing existing approaches to DCF implementation with the new curriculum
- › embedding digital competence across the school curriculum
- › sharing good practice within and outside the school
- › engaging with the school council and pupil voice
- › evaluating how the current approach to digital competence fits with the new curriculum.

From September 2022, settings and schools will be delivering digital competence on a cross-curricular basis. They will:

- › have embedded digital competence across the school curriculum
- › continue to adapt existing digital competence approaches to the new curriculum
- › continue to review and refine their approach to digital competence.

5. Support

The four main support mechanisms for practitioners are as follows.

Welsh Government resources

- › Classroom task ideas – to give practitioners a range of useful information, links and guidance to support delivery of the DCF.
- › Professional learning needs tool – to help identify the areas where practitioners feel confident and areas where they feel they need further development.
- › Mapping tool – which can be used to cross-reference elements of the DCF with your current teaching in subjects and years.
- › Animated explainers on the DCF and *Digital Competence Framework: Your questions answered* document.

Regional consortia

The four regional consortia will be hosting events and offering advice and support for schools. Challenge Advisors will ensure consistent messages about the DCF are delivered.

Estyn

Estyn will identify any good practice observed in schools in preparing for the DCF and share this on their website.

Digital Pioneer Schools

A list of Digital Pioneer Schools who have contributed to this guidance can be accessed from gov.wales/docs/dcells/publications/160107-list-of-pioneer-schools-en.pdf.

Welsh Government is grateful to the schools and the individual practitioners involved for giving their time, energy and expertise.